

REMARKS

I. Introduction

With the addition of claim 29, claims 15 to 29 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

As an initial matter, Applicants note that the Office Action Summary does not include an acknowledgment of the claim for foreign priority or an indication that all copies of the certified copies of the priority documents have been received from the International Bureau. Applicants respectfully request acknowledgment of the claim for foreign priority and an indication that all copies of the certified copies of the priority documents have been received from the International Bureau in the next Office communication.

Applicants thank the Examiner for considering the previously filed Information Disclosure Statement, PTO-1449 paper and cited references.

II. Objection to Claim 15

Claim 15 was objected to based on certain alleged informalities. The Examiner will note that claim 15 has been amended herein without prejudice to change the second instance of "an armature" to --the armature--. As regards the recitation of "move freely in an axial direction," Applicants do not agree that such recitation should read --move freely in a radial direction with respect to the valve needle--. In this regard, the Examiner's attention is directed, for example, to page 5, lines 26 to 29 of the Specification.

In view of the foregoing, it is respectfully submitted that the present objection has been obviated, and withdrawal of this objection is respectfully requested.

III. Rejection of Claims 15 to 28 Under 35 U.S.C. § 112

As regards the rejection of claims 15 to 28 under 35 U.S.C. § 112, second paragraph, claim 15 has been amended herein without prejudice to recite that the armature is connected to the valve needle in a non-friction-locked manner, thereby obviating the present rejection. Withdrawal of this rejection is therefore respectfully requested.

IV. Allowable Subject Matter

Applicants note with appreciation the indication of allowable subject matter contained in claims 17, 18, 20 and 22 to 28. As indicated above, each of claims 17, 18, 20, 22 and 24 has been rewritten herein in independent form to include all of the limitations of its respective base claim and any intervening claims. It is therefore respectfully submitted that claims 17, 18, 20, 22 and 24 are in condition for immediate allowance. Claim 21 depends from claim 20, claim 23 depends from claim 22, and claims 25 to 28 ultimately depend from claim 24. It is therefore respectfully submitted that claims 21, 23 and 25 to 28 are also in condition for immediate allowance.

V. Rejection of Claims 15, 16, 19 and 21 Under 35 U.S.C. § 102(b)

Claims 15, 16, 19 and 21 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. Re. 34,591 ("Yoshida"). Applicants respectfully submit that Yoshida does not anticipate the present claims as amended herein for the following reasons.

Claim 15 relates to a fuel injector for fuel injection systems of internal combustion engines. Claim 15 as presented recites that the fuel injector includes a valve needle, a first guide sleeve connected to the valve needle, a second guide sleeve connected to the valve needle in a friction-locked manner, and an armature connected to the valve needle in a non-friction-locked manner, in which the armature is situated between the first guide sleeve and the second guide sleeve such that it can move freely in an axial direction. Claim 15 further recites that the armature has a central opening whose diameter is greater than the diameter of the valve needle, and has a radial play with respect to the valve needle.

Yoshida purports to relate to an improved arrangement for energizing the electromagnetic assemblies of a high pressure fuel injection unit, which control fuel injection timing and the lift of the injection valve so as to reduce the risk of burning damage and improve durability. See Yoshida, col. 1, lines 10 to 16.

The Office Action asserts on page 3 that Yoshida discloses a valve needle identified by "56". However, Applicants respectfully disagree since the part identified by "56" in Yoshida is an enlarged portion 56 at the lower end of a bore 57 formed in a holder member 58 that supports a coil 72 of a sub-electromagnetic assembly 71. See Yoshida, col. 4, lines 22 to 26, and col. 5, lines 12 to 18. By

contrast, the part identified by "22" in Yoshida appears to more appropriately corresponds to a valve needle. See, for example, Yoshida, col. 3, lines 31 to 36, Figures 1, 2, and related text.

The Office Action also asserts on page 3 that Yoshida discloses an armature 74 that is situated between a first sleeve 75 and a second sleeve 54 such that the armature 74 moves freely in an axial manner and has radial play with respect to a valve needle. However, Applicants respectfully disagree since Yoshida merely describes the armature 74 as fixed (*i.e.*, non-detachably joined) to a cylindrical guide portion 75, and that the cylindrical guide portion 75 is arranged to be slidably supported in bore 57 of holder member 58 so as to regulate the lift amount of the valve needle 22. See Yoshida, col. 5, lines 18 to 15. In this regard, Yoshida does not disclose, or even suggest, that the armature 74 itself is guided so as to move freely on the valve needle 22, or has radial play with respect thereto. Indeed, Yoshida describes a lower guide sleeve up to which the armature 74 is able to move.

Moreover, as regards the assertion on page 3 of the Office Action that the part identified by "54" in Yoshida is a second guide sleeve, it is respectfully submitted that Yoshida merely describes part "54" as a cup-shaped retainer for spring support. See Yoshida, col. 4, lines 20 to 22. As can be gathered from Figures 1 and 2, the armature 74 cannot move between the cylindrical guide portion 75 and the cup-shaped retainer 54. Rather, the cup-shaped retainer 54, which is attached to valve needle 22, is used solely as a spring support for the return spring 53. See Yoshida, col. 4, lines 19 to 22. Accordingly, part 54 does not constitute a guide sleeve for the armature 74 and has nothing at all to do with limiting its movement.

To anticipate a claim, each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). As more fully set forth above, it is respectfully submitted that

Yoshida does not disclose, or even suggest, all of the limitations recited in claim 15. It is therefore respectfully submitted that Yoshida does not anticipate claim 15.

As for claims 16 and 19, which depend from claim 15 and therefore include all of the limitations of claim 15, it is respectfully submitted that Yoshida does not anticipate these dependent claims for at least the same reasons given above in support of the patentability of claim 15.

As regards claim 21, claim 21 depends from claim 20, which was indicated to include allowable subject matter. It is therefore respectfully submitted that claim 21 is allowable for at least the same reasons that claim 20 was indicated to include allowable subject matter.

VI. New Claim 29

New claim 29 has been added herein. It is respectfully submitted that new claim 29 does not add any new matter and is fully supported by the present application, including the Specification. Since claim 29 includes limitations analogous to limitations included in claim 15, it is respectfully submitted that claim 29 is patentable over the reference relied upon for at least the same reasons given above in support of the patentability of claim 15.

VII. Conclusion

It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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